



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,024	01/15/2002	Lawrence Sarresh	2380-442	7871
23117	7590	07/12/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			GELIN, JEAN ALLAND	
			ART UNIT	PAPER NUMBER
			2681	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/045,024	SARRESH ET AL.
	Examiner	Art Unit
	Jean A. Gelin	2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 22 February 2005.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-14, 17-34 and 40-49 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 32-34 and 44-49 is/are allowed.  
 6) Claim(s) 1-5, 9-11, 17, 18, 24-27, 30, 31, 40-43 is/are rejected.  
 7) Claim(s) 6-8, 12-14, 19-23, 28 and 29 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. This is in response to the Applicant's arguments and amendments in which claims 1, 4, 6, 17, 26, 32, 40, and 41, claims 44-49 have been added, and claims 15, 16, and 35-39 have been canceled. Claims 1-14, 17-34, and 40-49 are currently pending.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 9, 11, 15-18, 24, 26, 27, 30, 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Meszko (US 6,327,299).

Regarding claims 1, 17, 26, Meszko teaches a method of operating a base station included in a radio access network of a telecommunications system, the method comprising: obtaining, respectively from two diversity antennas (60 and 62) for a cell/carrier utilized in a sector served by the base station (fig. 1), two branches (26 and 28) of an uplink radio link signal (82 and 85 include uplink and downlink) (col. 6, lines 25-36); routing the two branches (26 and 28) of the radio link signal through two respective branches of signal processing hardware (56, 58) subsequent to receipt of the two branches of the uplink radio link signal from the respective two diversity antennas (col. 3, line 11 to col. 4, line ); measuring a delay difference between the two branches of the radio link signal (i.e., measurer 70 is located at a location equidistant from the

diversity antennas so that the delays through path 82 and 84 are equal, col. 4, lines 30-45).

Regarding claims 2, 18, Meszko teaches using a rake receiver for measuring the delay difference between the two branches of the radio link signal (i.e. measurer 70, col. 4, lines 15-46).

Regarding claims 3, 5, and 27, Meszko teaches using the delay difference to determine a delay alignment adjustment value for compensating for the delay difference between the two branches of the radio link signal (col. 3, lines 41-51).

Regarding claim 4, Meszko teaches wherein the radio link signal is an uplink signal to the radio base station, and further comprising using a rake receiver at the base station for measuring the delay difference between the two branches of the radio link signal (col. 4, lines 15-46).

Regarding claim 9, Meszko teaches applying the delay alignment adjustment value to one of the two branches of signal processing hardware to compensate for the delay difference (i.e., processor 54 controls delay circuits 50 and 52, col. 5, lines 23-53).

Regarding claim 11, Meszko teaches wherein the user equipment unit is a test user equipment unit, which is situated essentially equidistantly between the two diversity antennas (col. 4, lines 30-46).

Regarding claims 24, 30, and 42, Meszko teaches wherein the delay alignment adjustment value is applied to one of the two branches of signal processing hardware (col. 7, line 42 to col. 8, line 4).

Regarding claim 40, Meszko teaches wherein the rake receiver is situated at the test user equipment unit (col. 4, lines 30-46).

Regarding claim 41, Meszko teaches a processor at the base station, which uses the delay difference to determine a delay alignment adjustment value (col. 5, lines 24-53).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10, 25, 31, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meszko in view of Schilling et al. (US 2001/0024466 A1).

Regarding claims 10, 25, 31, and 43, Meszko teaches all the limitations above except applying the delay alignment adjustment value to a delay alignment buffer included in the one of the two branches of signal processing hardware to compensate for the delay difference.

However, the preceding limitation is known in the art of communications. Schilling teaches a storing for storing previous and present value received from a first and a second antenna wherein the first antenna is coupled to delay device such as a shift register, the received plurality of spread spectrum signals is delayed with respect to the plurality of phased versions of the spread spectrum signals (sections 0012, 0013, 0031-0033). Therefore, it would have been obvious to one of ordinary skill in the art, at

the time of the invention, to implement the technique of Schilling within the system of Meszko in order to use the storing means as shift register for performing the function storing the previous-magnitude value and the present-magnitude value for comparison; thus in response to the comparison, antenna beams are steered towards components of the spread spectrum signal with a highest combined magnitude.

***Allowable Subject Matter***

6. Claims 32-34, and 44-49 are allowed.
7. Claims 6-8, 12-14, 19-23, and 28-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's arguments filed 2/22/05 have been fully considered but they are not persuasive.

The Applicant argues that Meszco only describes downlink operations, e.g., Meszco's signal quality measurer 70 is used to measure only signals broadcast from antennas 60 and 62. However, the Examiner disagrees with the preceding argument, the antenna 80 of the measurer (which measure uplink signals from antennas 60 and 62) is placed at a location equidistant from antenna so that the delays from both antennas are equal. Therefore, the Examiner maintains the previous rejections.

Meszco does not suggest any delay compensation for uplink radio signal.

However, the Examiner disagrees with the preceding arguments because the "delay compensation for uplink radio signal" is nowhere to be found at least in claims 1, 17, and 26. Therefore, the previous rejections are maintained and are made final.

The Applicant argues that all claims depend on 1, 17 and 26 are allowable because claims 1, 17, and 26 are allowed. However, the Examiner disagrees with the preceding assertion because claims 1, 17, and 26 are rejected. Therefore, all dependent claims are rejected for the same reasons.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean A. Gelin whose telephone number is (571) 272-7842. The examiner can normally be reached on 9:30 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEAN GELIN  
PRIMARY EXAMINER

July 9, 2005  
JGelin

*jean Alland Gelin*